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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/990,819	11/16/2001	Thomas J. Augustin	10014433-1	3764

7590

06/17/2003

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EXAMINER

BUI, HUNG S

ART UNIT

PAPER NUMBER

2841

DATE MAILED: 06/17/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/990,819

Applicant(s)

AUGUSTIN ET AL.

Examiner

Hung S Bui

Art Unit

2841

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on amendment filed on 05/19/03.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) 14-20 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 November 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5-7.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Claims 14-20 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected claimed invention, there being no allowable generic or linking claim. Election was made **without** traverse in Paper No. 9.

Drawings

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference characters "114" and "110" have both been used to designate for a package lid and the integrated package and characters "212" and "214" have both been used to designate for a package lid. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

3. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the additional component must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 2 and 4-5 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 2, in line 5, applicant should clarify the structure of the isolation material being "or between two components of the support frame."

Regarding claim 4, in line 2, applicant should clarify the structure of "an isolation material is additionally provided between the support frame and an additional component."

Regarding claim 5, in lines 3-4, applicant should clarify whether the "a support frame" is intended to be the same support frame of claim 1, line 4.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

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7. Claims 1-4, 6 and 8-10 are rejected under 35 U.S.C. 102(e) as being anticipated by Akram et al. [US 6,165,817].

Regarding claims 1-2, 4, 6 and 8-9, Akram et al. disclose an apparatus (figure 3) comprising:

- a support frame (226) attached to a circuit component (250) and to a base component (230) which supports the circuit component on the base component;
- an isolation material (figure 3) located at a point between the circuit component and the base component including a point/layer (244/224) between the circuit component/the support frame and a point (233) between the support frame/the base component.

Regarding claims 3 and 10, Akram et al. disclose the isolation material (224) being polymer (column 8, line 21).

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Akram et al. in view of Mahulikar [US 5,103,292].

Regarding claim 5, Akram et al. disclose the apparatus including a lid (260) secured to the support frame and isolated from the base component by the isolation component.

Akram et al. disclose the instant claimed invention except for the apparatus including a lid and the isolation material being located at a point between the package lid and the support frame.

Muhulikar discloses a lid (36) for covering a component (32) being connected directly to a support member (figure 2).

It would have been obvious to a person having ordinary skill in the art at the time invention was made to use the lid connection design of Muhulikar for the lid of Akram et al., for the purpose of isolating the lid from the chip and support frame.

10. Claims 7 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Akram et al. in view of Ohbuchi et al. [US 5,719,746].

Regarding claims 7 and 11, Akram et al. disclose the instant claimed invention except for a package lid/support frame including a protrusion which cooperates with a corresponding recess on the other of the package lid/support frame with the isolation material therebetween.

Ohbuchi et al. disclose a lid (108, figure 6) having a protruded portion (134) extending into a recess (124) on a support member (106), wherein the protrusion is surrounded by an epoxy sealant (110, figure 6).

It would have been obvious to a person having ordinary skill in the art at the time invention was made to use the cover mounting design of Ohbuchi et al. for the lid of Akram et al., for the purpose of both sealing and isolating the lid from the support frame.

11. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Akram et al. in view of Patel [US 5,587,882].

Regarding claim 12, Akram et al. disclose the instant claimed invention except for a heatsink mounted on a support frame by means of an isolation material.

Patel discloses a heatsink (50) mounted on a support frame (figure 6) by means of an isolation material (41, column 5, lines 1-4).

It would have been obvious to a person having ordinary skill in the art at the time invention was made to use the heatsink and its specific mounting with the support frame of Akram et al., for the purpose of improving heat dissipation and providing isolation.

12. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Akram et al. in view of Yasukawa et al. [US 5,793,106].

Regarding claim 13, Akram et al. disclose the instant claimed invention except for the support frame being attached to the circuit board via a screw and the isolation material being located at a point between the screw and the circuit board.

Yasukawa et al. discloses a support frame (7) being attached to the circuit board (9) via a screw (10) and an isolation material (16) being located at a point between the screw and the circuit board (figure 1).

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It would have been obvious to a person having ordinary skill in the art at the time invention was made to use frame mounting method of Yasukawa et al. for the frame of Akram et al., for the purpose of firmly securing and isolating the support frame.

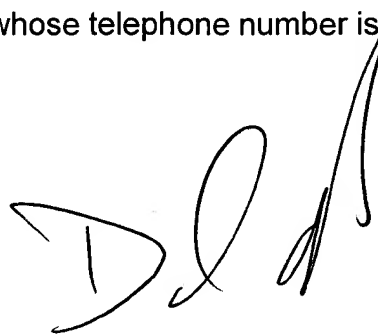
Conclusion

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hung S Bui whose telephone number is (703) 305-8024. The examiner can normally be reached on Monday-Friday 8:30AM-6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David S. Martin can be reached on (703) 308-3121. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and (703) 308-7724 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-0956.

HB
6/10/03

A handwritten signature in black ink, appearing to read 'D. Martin', with a large, stylized flourish extending upwards and to the right.

DAVID MARTIN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800